

FEASIBILITY STUDY

Pedestrian Access

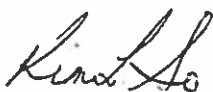
On US 29 at Rocky River

Cabarrus County

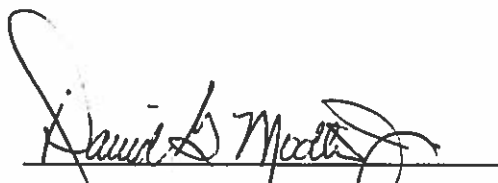
Division 10

U-3827

Prepared by
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FEASIBILITY STUDY

Pedestrian Access On US 29 at Rocky River

Cabarrus County

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I. GENERAL DESCRIPTION

This feasibility study evaluates the potential for providing spectators attending car racing events at the Charlotte Motor Speedway a safer facility to walk cross the Rocky River on US 29 in Cabarrus County (see Figure 1).

Six alternates were evaluated in this study. In the first three alternates, the existing two-lane dual bridges over Rocky River (Bridges Number 14 and 19) would be widened to three lanes with sidewalk widths of 5 feet (1.5 m), 10 feet (3.1 m), and 20 feet (6.1 m) respectively. Each sidewalk would be protected from vehicular traffic with concrete barriers. Alternates 4, 5 and 6 involve the construction of a pedestrian bridge over the Rocky River adjacent to each of the existing dual bridges. Alternates 4 and 5 are steel bridges with a width of 10 feet (3.1 m) and 20 feet (6.1 m) respectively. Alternate 6 is a 20-foot (6.1-m) wide timber bridge.

The estimated costs for the five alternates are as follows:

	Alternate 1	Alternate 2	Alternate 3	Alternate 4	Alternate 5	Alternate 6
Right-of-way	\$ 39,000	\$ 42,000	\$ 48,000	\$ 47,000	\$ 50,000	\$ 50,000
Construction	<u>\$ 1,950,000</u>	<u>\$ 2,350,000</u>	<u>\$ 3,150,000</u>	<u>\$ 1,650,000</u>	<u>\$ 2,950,000</u>	<u>\$ 2,000,000</u>
Total	\$ 1,989,000	\$ 2,392,000	\$ 3,198,000	\$ 1,697,000	\$ 3,000,000	\$ 2,050,000

This study is not a detailed planning/environmental investigation. A feasibility study presents studied cross-sections for improvements, general corridors of improvements, and estimated costs of construction and right-of-way. This study attempts to identify any potential environmental, permitting, or other observed issues that deserve consideration in the planning and construction stages.

II. NEED FOR PROJECT

This project was requested by the Charlotte Motor Speedway. The bridges on US 29 over the Rocky River have a very narrow sidewalk; therefore, spectators inevitably walk in the traffic lanes as they cross the river to the

Charlotte Motor Speedway. This situation impedes traffic flow and jeopardizes the safety of the pedestrians.

Bridge Number 14 on northbound US 29 has a sufficiency rating of 74.9 and an estimated remaining life of 12 years. Bridge Number 19 on southbound US 29 has a sufficiency rating of 59.5 and an estimated remaining life of 12 years.

US 29 is classified as Urban Other Principal Arterial on the Statewide Functional Classification System. It is classified as a Major Thoroughfare on the Concord-Kannapolis-Landis-China Grove Thoroughfare Plan.

US 29 south of the Rocky River is currently programmed for improvements under TIP Project U-3115. US 29 will be widened from 4 lanes to a 6-lane, median-divided, shoulder section.

III. STUDIED ALTERNATES

This feasibility study evaluates the potential for providing spectators attending car racing events at the Charlotte Motor Speedway a safer facility to cross the Rocky River on US 29 in Cabarrus County (see Figure 1). Five alternates were evaluated in this study.

Alternate 1

Widen Bridges Number 14 and 19 to 3 lanes each with a deck width of 57 feet (17.4 m). Each bridge would have three 12-foot (3.7-m) wide travel lanes, 4-foot (1.2-m) left shoulder, 10-foot (3.1-m) right shoulder, and 5-foot (1.5-m) sidewalk divided from the travel lanes by concrete barriers. Protective fences would be installed along right side of the sidewalk. At the southern end of the bridge, a 5-foot (1.5-m) wide concrete ramp with handrails would connect the sidewalk to a service road beneath the bridge. This service road is maintained by the Charlotte Motor Speedway.

The estimated cost of the project is \$1,989,000 (\$39,000 for right-of-way and \$1,950,000 for construction).

Alternate 2

This alternate is similar to Alternate 1 except the bridges would have a deck width of 62 feet (18.9 m) to accommodate a 10-foot (3.1-m) wide sidewalk. The concrete ramp would also be 10 feet (3.1 m) wide. The estimated cost of the project is \$2,392,000 (\$42,000 for right-of-way and \$2,350,000 for construction).

Alternate 3

This alternate is similar to the preceding alternate except the bridges would have a deck width of 72 feet (22 m) to accommodate a 20-foot (6.1-m) wide sidewalk. The concrete ramp would also be 20 feet (6.1 m) wide. The estimated cost of the project is \$3,198,000 (\$48,000 for right-of-way and \$3,150,000 for construction).

Alternate 4

Provide a 10-foot (3.1-m) wide steel pedestrian bridge adjacent to each of the existing bridges. A 10-foot (3.1-m) wide concrete ramp with handrails would connect the southern end of the pedestrian bridge to a service road that is maintained by the Charlotte Motor Speedway. The estimated cost of the project is \$1,697,000 (\$47,000 for right-of-way and \$1,650,000 for construction).

Alternate 5

This alternate is similar to Alternate 4, except the width of the steel pedestrian bridges and concrete ramps would be 20 feet (6.1 m). The estimated cost of the project is \$3,000,000 (\$50,000 for right-of-way and \$2,950,000 for construction).

Alternate 6

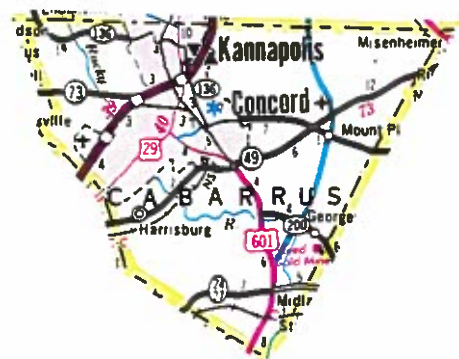
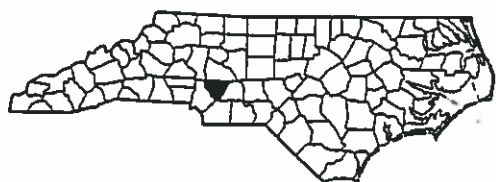
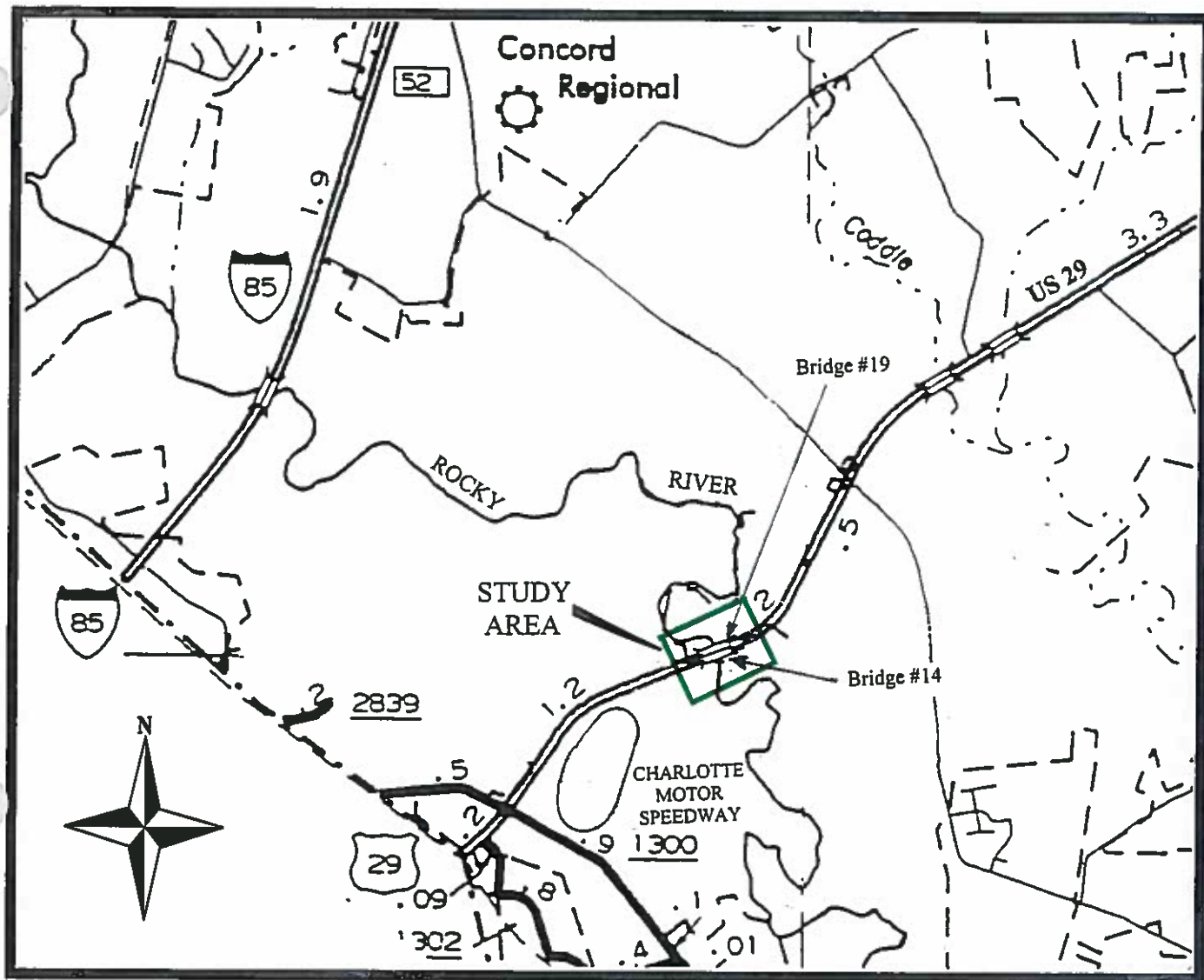
This alternate is similar to Alternate 5. In lieu of the steel pedestrian bridges, timber bridges are proposed. The estimated cost of the project is \$2,050,000 (\$50,000 for right-of-way and \$2,000,000 for construction).

It is anticipated that this project would require no residential or business relocations.

IV. OTHER COMMENTS AND CONCERNS

No historical or architecturally significant sites have been identified in the project corridor.

Based on maps available at the Department of Environment, Health, and Natural Resources - Natural Heritage Section, no threatened or endangered species were identified in the project corridor.



NC DEPARTMENT OF TRANSPORTATION FEASIBILITY STUDIES UNIT	
U-3827 US 29, Pedestrian Access at Rocky Creek	
Cabarrus County	
DIVISION 10	FIGURE 1

